NWS Form E-5 U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE **MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS**	**HYDROLOGIC SERVICE AREA:** **Pocatello, Idaho**
	REPORT FOR: **MONTH: July YEAR: 2004**
TO: Hydrologic Operations Division, W/OH2 National Weather Service National Oceanic and Atmospheric Administration Silver Spring, Maryland 20910	**SIGNATURE:** Sherrie Hebert (In Charge of Hydrologic Service Area) **DATE** August 13, 2004
When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (NWS Instruction 10-924).	

☐ **An X in this box indicates that no flooding has occurred for the month within this hydrologic service area.**

Monsoonal moisture produced severe thunderstorms and flash flooding in Eastern Idaho on July 18 and 26. The July 18 storms poured 1.90 inches of precipitation in less than 45 minutes on Pocatello's eastern foothills resulting in damage estimated at $542,000. Much of the damage occurred to homes located below a recently plowed field that sloped toward the residential area. Damage ranged from minor street and driveway flooding to a basement, which had only been completed that week, filled to the ceiling with mud and water. A storm survey suggested the home owners and farmer work together with the city to develop plans to alleviate future similar situations from occurring. Flash Flood Watches were issued the morning of July 18 and Flash Flood Warnings prior to the event.

As hopeful as it may seem, the July monsoonal precipitation did not bring much relief to the drought situation that has plagued Eastern Idaho since 1999. The rain did, however allow farmers to reduce water consumption sparing some of what remains in the reservoirs for use later in the summer. What remains may or may not be enough for the irrigation season according to the August Surface Water Supply Index (SWSI) provided by the Natural Resources Conservation Service (NRCS).

Other Hydrologic Interests

Precipitation

July precipitation for the Pocatello Hydrologic Service Area (HSA) was 156% of normal for 39 of 42 reporting stations with climate data, according to Western Region Climate Center data. More than one-half of the Pocatello HSA stations received greater than 100% of normal July precipitation, with six receiving at least 200% of normal, which are below.

Station Name	Precipitation (inches)	Normal (inches)	Percent of Normal
Picabo	1.05	0.36	291.7
Chilly Barton Flats	2.48	0.92	269.6
Oakley	1.79	0.73	245.2
Idaho Falls 46 W	1.25	0.51	245.1
Mackay Ranger Station	1.87	0.93	201.1
Burley 2 S	0.70	0.35	200.0

Shoshone received only a trace of precipitation, tying the July 1978 record of 0.00 inches. Stations receiving less than 50% of normal precipitation were Richfield (0.11 inches, 36.7%), Lifton (0.19 inches, 26.8%) and Grace (0.12 inches, 12.8%).

Although the HSA July precipitation was above normal, all precipitation came because of severe weather. The rain did help to alleviate some reservoir storage use, however only for very short durations. The Pocatello WFO, in particular, received 0.65 inches of its 1.02 inches during the July 18 storms in less than an hour producing only rapid, short-term runoff. Had this precipitation not fallen, the Pocatello WFO would have been 52.9% of normal, a better representation of the actual drought situation that has held on for over five years. Thus, the precipitation did help the 2004 Water Year only in a numbers respect increasing it 3.2 percentage points to 99.2% of normal from 96% in June.

Reservoirs

Further evidence that July's severe storms did little to improve the drought situation, the Upper Snake River reservoir system is at 24% of capacity[1], down 17% from July 10, 2004.

Reservoir	% Capacity June 30[2]	% Capacity July 31[3]	Percent Change	% of Average[3]	% of Last Year[3]
American Falls	44	21	-23	34	117
Blackfoot	14	8	-6	12	105
Henry's Lake	84	73	-11	79	87
Island Park	86	59	-27	79	128
Little Wood	74	45	-29	84	96
Mackay	20	4	-16	7	180
Magic	7	8	1	13	66
Oakley	20	14	-6	35	186
Palisades	48	39	-9	48	148
Ririe	58	55	-3	66	109
Lake Walcott	100[4]	100[5]	0	n/a	n/a

Source: (1) US Bureau of Reclamation (BOR), August 10, 2004; (2) NRCS, June 30, 2004; (3) NRCS, July 31, 2004; (4) BOR, July 10, 2004; (5) BOR, August 10, 2004.

Surface Water Supply Index (SWSI) values for Eastern Idaho basins did increase somewhat since July, however they continue to be extremely low. The Big and Little Lost basins are showing recovery as Mackay Reservoir has ceased releases for the year.

Basin	August SWSI	Most Recent Year with Similar Value	July SWSI	Most Recent Year with Similar Value
Big Wood	-2.1	2003	-3.2	2001
Little Wood	-0.4	2003	-1.0	2000
Big Lost	-3.6	2003	-3.9	2001
Little Lost	-3.8	2003	-3.8	2003
Snake at Heise	-3.3	2001	-3.9	2001
Oakley	-2.3	2002	-2.5	2001
Bear River	-4.0	2003	-3.9	2003

Drought
Although most stations reported above-normal precipitation, the Pocatello HSA has developed such a large precipitation deficit, drought conditions across Eastern Idaho will not be improving this year. Eastern Idaho continues to rank entirely in the D3, "Extreme", and D4, "Exceptional" categories on the US Drought Monitor. Low soil moisture, low SWSI values and above-normal temperature and below-normal precipitation outlooks leave little to no room for relief in the near future.

Current Emergency Drought Declarations for 2004 include 16 of 17 Eastern Idaho counties, Minidoka being the exception, of the 22 declared statewide. The first county declared was Clark County on April 14 and the most recent being Cassia County on July 27.

Summary of Products Issued in July 2004

Product	Number Issued
Flash Flood Warning	**6**
Flood Watch for Flash Flooding	**4**
Flood Warning	0
Flood Watch	0
Urban and/or Small Stream Flood Warning	0
Urban and/or Small Stream Flood Advisory	0
Flood Statement	**7**
Hydrologic Statement	0
Hydrologic Outlook	0
NOW or Special Weather Statement (with information related to flooding)	0
Local Storm Report related to flooding	**11**

July Hydrologic Product Verification Summary

Product	Number Issued	Verification			Lead Time
		Verified	False Alarm	Missed Event	
FFW	6	2	2	2	1 to 53 minutes
FFA	3 + 1 cxl	1	2	0	~ 5.5 hours
FLS	7	n/a	n/a	n/a	n/a

Comments
July 18: $542,000 damage to flooded homes and property. Verified event.
July 26: $3000 property damage to approximately 100 feet of fence. Missed event.

cc: Melissa Smith, WFO Hydrology Program Manager
Harold Opitz, HIC NWRFC
Hydrometeorological Information Center
Jim Meyer, MIC PIH
Jay Breidenbach, SH BOI